

as establishing such transformation. The current ruling, more especially in vertebrate zoölogy, which, in view of such intermediates reduces to subspecies widely diverse organic forms may well be suspected of being artificial and of attaching a fictitious importance to the mere evidences of origin which chance, perhaps, has allowed to remain unobliterated. Some fault of logic surely enters into a doctrine by which living types possessing organic values of high distinction in their class are reduced to relatively low taxonomic rank. A study such as the one before us, by its conscientious method, its open-mindedness, its enlightening results is a telling protest against the conventional, the artificial, the easy in taxonomic work.

Illustrations are indispensable to these pages and are well and effectively supplied. The unshaded heliotype plates, mostly of entire plants, are delicately true and bear touched into their outlines something indefinable which recalls instantly the individuality of the living plant. The many cuts scattered through the context are mostly by the author's own hand and add a guiding value which well justifies the evident care in bringing out essential points which has been bestowed on them.

The student of *Aster* may now take courage. It is the promise of this volume that the old hopeless search for real asters among those ghosts and figments of systematic botany — inclusive species — may presently remain to us only a doleful memory.

E. P. BICKNELL.

Winton's Microscopy of Vegetable Foods*

The author prefaces his work with a brief discussion of the apparatus, reagents, preparation of material for examination, and the histology and morphology of vegetable organs. The discussion in which the reader is especially interested is divided into nine parts as follows: 1. Grain: its products and impurities. 2. Oil seed and oil cakes. 3. Legumes. 4. Nuts. 5. Fruits and fruit products. 6. Vegetables. 7. Alkaloidal products and their substitutes. 8. Spices and condiments. 9. Commercial starches. The work contains a glossary and index.

*Winton, A. L. *The Microscopy of Vegetable Foods*, with special reference to the detection of adulteration and the diagnosis of mixtures. 8vo. i-xvi + 1-701. *f.* 1-589. New York, John Wiley & Sons. 1906. Price \$7.50.

The remarks on plant morphology, as well as the explanation of some of the terms in the glossary, will appeal to the botanist as requiring further consideration. The main part of the work merits the highest praise for the thoroughness with which this wide field has been considered, and for the scientific accuracy with which the various subjects have been treated. A vast amount of material has been compiled in a very concise form and arranged in a systematic order, so that it is available for ready reference to anyone who has occasion to make analyses of the foods of man and cattle. The value of the work is materially enhanced by a general bibliography, supplemented by a reference list of authorities on various special groups of foods.

Each part of the book contains a brief account of the various plants or organs used for food, the form in which the food is used and a detailed study of the structure and character of the tissues yielding the foods or of the admixtures and impurities. The characteristics of the substances that are of diagnostic value are fully illustrated by an extensive series of drawings. Special methods for the examination of certain groups are introduced in several instances as well as keys for the identification of various foods and adulterations as in the case of the grains, oil seeds and legumes.

This discussion of the sources of foods will appeal strongly to people who are not familiar with the subject as well as to the specialist. Probably there are few subjects so intimately related to our welfare with which we are so vaguely acquainted. For the same reason the extent and nature of the admixtures will be a matter of surprise, also the kind and parts of plants utilized for this purpose.

It is a very remarkable fact, considering the amount of work that has been done, especially in Germany and France, that heretofore no work has appeared in English devoted exclusively to the microscopy of foods. This text that has finally appeared is closely affiliated with Professor Moeller's work on food analysis which recently appeared with the collaboration of the author. Mr. Winton has, however, introduced a great amount of material into the present volume relating especially to America, and has

brought out a comprehensive treatise that will be widely welcomed and appreciated.

CARLTON C. CURTIS.

PROCEEDINGS OF THE CLUB

MARCH 28, 1906

The Club met at the Museum Building of the New York Botanical Garden, at 3:30 P. M. In the absence of President Rusby, Dr. C. C. Curtis was called to the chair.

Thirteen persons were present.

After the reading and approval of the minutes of the preceding meeting the following names were proposed for membership :

Mr. Alfred Cuthbert, Augusta, Ga. ; Mr. S. M. Tracy, Biloxi, Miss. ; Mrs. J. Newlin Trainer, 311 West 111th Street, New York City.

On behalf of the committee appointed at the last meeting to arrange for a celebration of the tenth anniversary of the establishment of the New York Botanical Garden, Dr. W. A. Murrill reported progress and briefly outlined the nature of the proposed celebration.

Professor Underwood was delegated to represent the Club at Philadelphia in April at the coming bi-centennial of the birth of Benjamin Franklin, in place of President Rusby, who resigned at the preceding meeting.

A communication was read from Dr. N. L. Britton, as secretary of the Council of the Scientific Alliance, outlining the proposition to bring about a closer relationship between the special scientific societies composing the Scientific Alliance with the New York Academy of Sciences. It was urged that at least two of the delegates of the Club be present at a meeting of the Council of the Scientific Alliance to discuss this topic further. This meeting will be held some time in April, 1906, the exact date to be announced later.

Dr. W. A. Murrill proposed the following amendment to the constitution :

“The number of honorary members of the Club shall not exceed ten, at any one time, and all restrictions as to qualifications shall be removed, except eminence in profession.”